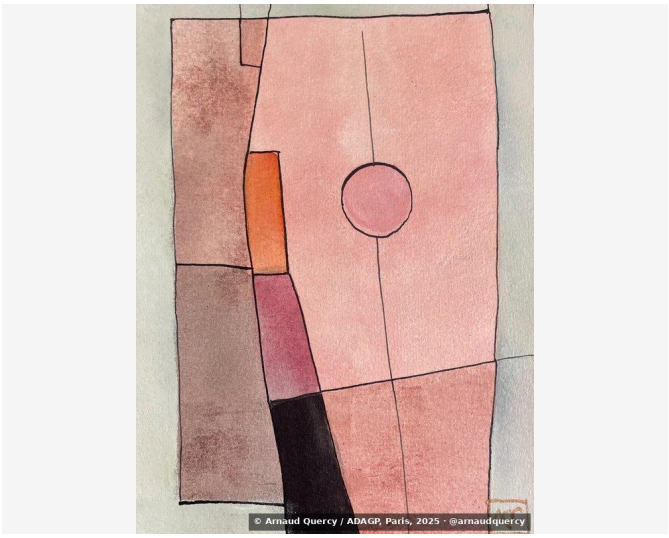
AQC0817 | NAN-COL000137

Nanopublication — Computational Image Analysis - AQC0817

by Arnaud Quercy · C Major - Research on Harmony - Variation 9 · 2025



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS - AQC0817

Computational image analysis of artwork C Major - Research on Harmony - Variation 9 (AQC0817) [1] by Arnaud Quercy [2], performed according to IDS-CMP-2025 [3], using k-means clustering method with 10 color extraction parameters. Analysis includes color distribution, texture metrics, brightness/contrast measurements, and spatial pattern characterization. Analysis completed on 2025-10-03.

CONTEXT

Analysis performed according to IDS-CMP-2025 [3] includes four metric categories: (a) Color distribution via k-means (10 colors), (b) Texture analysis using Haralick features, (c) Brightness and contrast measurements, (d) Spatial pattern characterization. Source image: 2376x3168 pixels. Analysis date: 2025-10-03.

A) COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		E3A99E	23.8	red-orange	tan
2		EEB9AF	15.8	red-orange	lightpink
3		D5D2C6	12.9	yellow	lightgray
4		D3958B	12.8	red-orange	rosybrown
5		B5877E	11.3	red-orange	palevioletred
6		C4C0B6	9.3	yellow-orange	silver
7		A16C68	5.9	red-orange	gray
8		221518	5.0	red	black
9		DC7045	1.7	orange	peru
10		5A423E	1.4	red-orange	dark brown

Color Families:

Family	%
red-orange	71.1
yellow	12.9
yellow-orange	9.3
red	5.0
orange	1.7

B) TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.171
Mean Local Roughness	0.019
Roughness Uniformity	0.019
Edge Density	0.08
Mean Gradient Magnitude	0.155
Gradient Variance	0.043
Gradient Smoothness	0.0
Directional Coherence	0.007
Pattern Complexity	0.114
Pattern Repetition	1.0
Detail Frequency Ratio	0.623
Spatial Variation	0.098
Texture Consistency	0.621

C) BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.672
Brightness Variance	0.171
Brightness Uniformity	0.746
Brightness Skewness	-2.022
Brightness Entropy	6.847
Rms Contrast	0.171
Michelson Contrast	1.0
Weber Contrast	0.389
Mean Local Contrast	0.02
Contrast Uniformity	0.071
Dynamic Range	1.0
Effective Dynamic Range	0.643
Shadow Percentage	6.044
Midtone Percentage	26.782
Highlight Percentage	67.174
Shadow Clipping	0.008
Highlight Clipping	0.002
Tonal Balance	0.0
Fine Contrast	0.01
Medium Contrast	0.026
Coarse Contrast	0.04
Multiscale Contrast Ratio	0.248
Edge Contrast	0.155
Contrast Clustering	0.379

D) SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.709
Color Clustering	0.559
Color Transition Smoothness	0.613
Transition Uniformity	0.711
Sharp Transition Ratio	0.1
Transition Directionality	0.013
Mean Saturation	0.265
Saturation Variance	0.018
Low Saturation Ratio	0.598
Medium Saturation Ratio	0.392
High Saturation Ratio	0.01
Saturation Clustering	0.999
Hue Concentration	0.986
Complementary Balance	0.0
Analogous Dominance	0.998
Temperature Bias	1.0

Methodology

This analysis employs standardized computational methods for objective image characterization. Color extraction uses k-means clustering algorithm. Texture analysis applies Haralick feature extraction. Brightness metrics include mean, variance, and distribution analysis. Spatial patterns are characterized through coherence and clustering measurements. All methods are deterministic and reproducible. Analysis performed by Ideamorphic Studies' computational imaging systems.

REFERENCES

[1] Quercy, A. (2025). C Major - Research on Harmony - Variation 9 - Catalogue Raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0817.html

[2] Quercy, A. (2025). ORCID https://orcid.org/0009-0000-2662-7790

[3] Quercy, A. (2026). Computational Image Analysis Standard. https://ideamorphism.org/en/measurements/2025/11/ids-cmp-2025-computational-image-analysis-standard-5dq9.html

EPISTEMIC PROFILE

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

CHECKSUM (SHA-256)

1fa184044a16d1ee03a5357aacb2df096a346f119d57099a58dcd89db490268f

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